

# APPROVED

<b>Programme Short Title</b>	BSc in Computing		
<b>Programme Code</b>	DK_ICOMP_7	<b>Mode of Delivery</b>	Full Time, Part Time
		<b>No. of Semesters</b>	6
<b>Semesters Per Stage</b>	2	<b>NFQ Level</b>	7
		<b>Programme Credits</b>	180
<b>Language of Instruction</b>	English		
<b>Field of Study</b>	481 - Computer Science		
<b>Educational Aim of Programme</b>	The aim of this programme is to produce graduates with broad knowledge and understanding of computing concepts at an intermediate level and more advanced knowledge of selected concepts as determined by their elective stream.		
<b>External Code</b>	<b>Code</b>		
<b>Programme Extra Information</b>	The programme supports two elective streams: Group Elective 1 (Software Development) and Group Elective 2 (Networking and System Administration). Students opting for the Software Development Stream will have advanced knowledge of Web application development, in particular the assembly of applications using various technologies. Students opting for the Networking and System Administration Stream will have advanced knowledge of network management, administration and design. They will also have advanced knowledge of System Services and will be able to design, implement, manage and troubleshoot typical System Services in a heterogeneous environment.		

## Programme Learning Outcomes (PLOs)

On successful completion of this programme the learner should be able to :

#	Description
PLO1	The learner will have knowledge and understanding of intermediate and some advanced concepts in the following areas: - Computer Systems - Software Engineering - Information Systems - Mathematical Foundations and Statistics - Computing Techniques - Computer Networks - Social and Professional Issues
PLO2	explain the concepts and theories of the core specialisation and some optional computing topics;
PLO3	integrate concepts learned across a variety of subject areas;
PLO4	recognise the limitations of their areas of expertise.
PLO5	implement system modelling techniques (such as entity-relationship, class and use-case modelling);
PLO6	show proficiency in at least one programming language;
PLO7	use numeracy skills in presenting cases involving a quantitative dimension;
PLO8	design and implement computer- based systems;
PLO9	deploy computer-based systems in a well-defined context;
PLO10	apply the principles of human- computer interaction to the evaluation and construction of a wide range of materials including user interfaces and web pages;
PLO11	apply the principles of effective information management, organisation and retrieval to information of various kinds;
PLO12	identify relevant material on a given topic from available information sources;
PLO13	succinctly present rational and reasoned arguments to a range of audiences;
PLO14	create effective technical documentation.
PLO15	test and confirm the extent to which a computer-based system meets the criteria defined for its current use;
PLO16	create technical documentation, locate and evaluate information through online research;
PLO17	design and implement computer- based systems;
PLO18	apply strategies to identify and solve computer system problems;
PLO19	justify selections from alternatives;
PLO20	develop innovative solutions to pragmatic situations;
PLO21	identify and analyse criteria and specifications appropriate to specific problems and plan strategies for their solution;

#	Description
PLO22	recognise the moral and ethical issues involved in the exploitation of computer technology.
PLO23	recognise risks or safety aspects relevant to computing systems within a given context;
PLO24	recognise the best practices relevant to a range of real-world contexts;
PLO25	recognise ethical and legal practices in the exploitation of computer technology;
PLO26	recognise the suitability of a given solution to a problem;
PLO27	recognise the suitability of a given diagnostic technique in a context;
PLO28	describe the impact of new technologies in a given environment.
PLO29	work effectively as a member of an interdisciplinary team;
PLO30	interact effectively with a range of staff at different levels in an organisation;
PLO31	plan and organise work;
PLO32	monitor project work against a plan.
PLO33	generate new ideas;
PLO34	apply knowledge learned in new situations;
PLO35	design and manage personal projects.
PLO36	describe some of the wider social and business contexts within which computing professionals operate;
PLO37	describe the benefits of diversity in teams.

## Semester Schedules

### Stage 1 / Semester 1

Mandatory	
Module Code	Title
COMP C7011	<a href="#">Communication Skills</a>

CSYS C7Z19	<a href="#">Computer Hardware</a>
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PROG C7Z22	<a href="#">Introduction to System Administration</a>
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PROG C8Z28	<a href="#">Introduction to Web Development</a>
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MATH C7002	<a href="#">Mathematics for Computing</a>
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PROG C7Z23	<a href="#">Programming Principles</a>
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### Stage 1 / Semester 2

Mandatory	
Module Code	Title
PROG C7014	<a href="#">Dynamic Web Development</a>

PROG C7015	<a href="#">Introduction to Databases</a>
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PROG C7Z25	<a href="#">Introduction to Networking</a>
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PROG C7Z24	<a href="#">Introduction to Scripting</a>
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### Stage 2 / Semester 1

Mandatory	
Module Code	Title
MATH C7001	<a href="#">Data Analysis for Computing</a>

Group Elective 1	
Module Code	Title
COMP C7012	<a href="#">Algorithms</a>

DBMS C7007	<a href="#">Database Development</a>
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PROG C7005	<a href="#">Object-Oriented Programming</a>
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SWRE C7004	<a href="#">Software Testing</a>
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PROG C7004	<a href="#">Web Application Development</a>
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Group Elective 2	
Module Code	Title
NETW C7030	<a href="#">Data Communications</a>

NETW C7020	<a href="#">Internetworking</a>
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PROG C7017	<a href="#">Operating Systems and Virtualization</a>
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PROG C7016	<a href="#">Programming for System Administration and Networking</a>
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PRPF C7004	<a href="#">Technical Documentation</a>
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## Stage 2 / Semester 2

Group Elective 1	
Module Code	Title
DBMS C7008	<a href="#">Database Management</a>

COMP C7013	<a href="#">Data Structures</a>
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SWRE C7003	<a href="#">Introduction to Software Engineering</a>
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SWRE C7007	<a href="#">Security for Software Developers</a>
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Group Elective 2	
Module Code	Title
SWRD C7002	<a href="#">Directory Services</a>

NETW C7032	<a href="#">IPv6</a>
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PROG C7018	<a href="#">WAN Protocols</a>
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NETW C7026	<a href="#">Wireless Technologies</a>
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### Stage 3 / Semester 1

Mandatory	
Module Code	Title
COMP C7014	<a href="#">Cloud Foundations</a>

Group Elective 1	
Module Code	Title
DBMS C7006	<a href="#">Database Administration</a>

SWRE C7005	<a href="#">Software Project Management</a>
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PROG C7006	<a href="#">Web Frameworks</a>
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PROG C7007	<a href="#">Web Patterns</a>
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PROG C7008	<a href="#">Web Services</a>
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Group Elective 2	
Module Code	Title
PROG C7020	<a href="#">Advanced Networking</a>

PROG C7019	<a href="#">Advanced System Administration</a>
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NETW C7027	<a href="#">Network Design</a>
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PROJ C7002	<a href="#">Project</a>
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PROG C7012	<a href="#">Service Desk Support</a>
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### Stage 3 / Semester 2

Mandatory	
Module Code	Title
COMP C7015	<a href="#">Cloud Technologies</a>

Group Elective 1	
Module Code	Title
COMP C7016	<a href="#">Ethics and Professional Issues</a>

NETW C7022	<a href="#">Network Programming</a>
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PROJ C7Z06	<a href="#">Software Project</a>
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Group Elective 2	
Module Code	Title
COMP C7017	<a href="#">Applied Security</a>
NETW C7024	<a href="#">Broadband Technologies</a>
NETW C7029	<a href="#">Network Management</a>